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NOTES ON MESEMBRYANTHEMUM
AND ALLIED GENERA

H. M. L. BOLUS

Argyroderma litorale L. Bol. sp. nov. (*Roodia*).—Folia fere erecta vel ascendentia, divergio 1·5—3 cm. longo, supra apud apicem rotunda, lateraliter visa rotunda vel rarissime oblique subacuta, 4—6·5 cm. longa cum vagina 1·5—2·5 cm. longa, ad 1·3 cm. lata, 1—1·9 cm. diam.; pedunculi 1·4—3·3 cm. longi, parum supra basim bracteati; bractae obtusae, 1·2—1·9 cm. longae; receptaculum ad 7 mm. longum, non, vel rare, apicem foliorum attingens; sepala 6—7, obtusa vel subacuta, omnia $\pm$ marginata, 4—5 mm. longa, basi 4—5 mm. lata; petala circa 4-seriata, inferne non, vel vix, angustata, saepius obtusa, lutea, 5—15 mm. longa, vix ad 1·25 mm. lata; stamina albida, 3 mm. longa; pulvinus stigmatiferus circa ad 3 mm. diam.

CAPE PROVINCE: in dit. Vanrhynsdorp; Papendorp, "at the mouth of the Olifants River," *H. Hall*. N.B.G. 604/57. Fl. Jul. 1962.

This is the first species of **Argyroderma** to be recorded from the sea-coast.

Astridia alba L. Bol. sp. nov.—*A. rubra* (L. Bol.) L. Bol. var. *alba* L. Bol., in vol. XXVII: 170 (Jul. 1961)—Rami 2 visi, stricti, 26 cm. et 14 cm. longi, internodiis 2—3·5 cm. longis, ad 7 mm. diam.; folia ascendentia, supra anguste lanceolata, acuta vel rare obtusa, lateraliter visa prope apicem angustata, apice leviter recurvo, ad 5 cm. longa, 1·2 cm. lata, 1·3 cm. diam., eis bracteas subtendentibus 2—3·5 cm. longis; bractae variabiles, lateraliter visae acutae vel acuminatae, semi-ovatae vel oblique ovatae vel lanceolatae, margine rare obscure emarginato, 1—2 cm. longae; flores 5—6·2 cm. diam.; receptaculum obconicum, ad 5 mm. longum, ad 9 mm. diam.; sepala exteriora obtusa vel

subacuta, 9—12 mm. longa, basi 5—6 mm. lata, interiora obtusa, superne obtuse subulata, 8—10 mm. longa, basi 3—6 mm. lata; petala sat laxa, ca. 4-seriata, inferne e prope medium leviter, vel vix, angustata, obtusa alba, ad 2·6 cm. longa, ad 1·75 mm. lata; staminodia alba, interdum stamina excedentia; filamenta ca. ad 8-seriata, ad 8 mm. longa, antheris pollineque primum luteis; ovarii lobi discum non attingentes, per 1 mm. elevati; stigmata gracillima, ad 8 mm. longa cum cauda 1 mm. longa.

CAPE PROVINCE: Namaqualand; Swartpoort, Richtersveld, "about 3 miles upstream from Sendelings Drift," *H. Hall* 1308a, N.B.G. 107/58a. Fl. Mart.—Apr. 1961.

Astridia citrina L. Bol. sp. nov.—*A. rubra* (L. Bol.) L. Bol. var. *citrina* L. Bol., in vol. XXVII: 170 (Jul. 1961)—Rami 3 visi, 8—18 cm. longi, ad 8 mm. diam., internodiis ad 2·5 cm. longis; ramuli ultimi 2-foliati; partes herbaceae in siccis fere albae asperaeque; folia saepius fere erecta, matura subfalcata, supra plana linearia, prope apicem leviter angustata, acuta vel obtusa, lateribus convexulis, obtuse carinata, lateraliter visa prope apicem leviter angustata, obtusa vel subacuta, ad 7 cm. longa, 8—10 mm. lata, ad 1·9 cm. diam., eis bracteas subtendentibus praecipue magnis, ad 5 cm. longis; bracteae manu complanatae in circuitu ovatae, e supra medium angustatae, obtusae, rubre marginatae, 1·1 cm. longae, medio 1 cm. lato; receptaculum globose obconicum, 6 mm. longum, apice 10 mm. diam.; sepalae e basi angustata, obtusa vel subacuta, interiora interdum obtuse breviterque subulata, 8—11 mm. longa, basi 5—8 mm. lata; petala ca. 3-seriata, sat laxa, interiora pauca, e supra medium inferne angustata, obtusa vel emarginata, cum staminodiis, filamentis stigmatibusque, citrina, 1—2·4 cm. longa, 1—3 mm. lata; staminodia inferne ciliata, stamina subaequantia; filamenta ca. 7-seriata, antheris pollineque luteis; ovarii lobi acute compressi, discum non attingentes, ad 2 mm. elevati; stigmata gracillima, ad 1·1 cm. longa cum cauda ad 2 mm. longa; capsula unica senecta imperfectaque tantum visa, valvis 2 ample alatis, alis e parum supra basim liberis; semina muricata brunnea.

SOUTH-WEST AFRICA; in the southern parts, *E. Rusch* et *F. Erni*. Fl. Government Gardens, Windhoek, Jul.—Aug. 1937, numerata 58. Comm. *H. M. Holloway*.

These notes are made partly from the living, and partly from the dried, material as well as from Miss B. O. Carter's drawings made from life. In her drawing of the expanded capsule the semi-obovate wings are shown attached to the valve for their whole length. This is the first species of *Astridia* to be recorded with winged valves.

Conophytum middlemostii L. Bol. sp. nov. (*Euconophytum-Wettsteiniana*).—

Corpuscula obconica, supra plana, 1 cm. longa, 9 mm. lata, 1 cm. diam., ore 3 mm. longo; vaginae persistentes cum aetate dense crebrae, superiores inferne pergamentaceae, pallide brunneae, politae, superne interdum sat dense rubre brunneo punctatae, ad 1.2 cm. longae; pedunculi ad 3.5 mm. longi, apud basim bracteati, bracteae primum carnosissimae, lateraliter visae obtusae, 3 mm. longae, vagina ad 2 mm. longa, apice in siccis rubre glandulifero, sinu lato; receptaculum ad 1.25 mm. longum, ad 2 mm. diam.; calyx ad 9 mm. longus, tubo membranaceo, 7 mm. longo, segmentis 5, obtusis; corolla 2.1—3.2 cm. longa, tubo pallido, 1.3—2.3 cm. longo, segmentis ca. 3-seriatis, obtusis vel subacutis, roseis, 0.5—1.25 mm. latis; stamina ca. 6-seriata, e parum infra medium tubi adnata, seriebus superioribus 2 breviter exsertis, antheris pollineque luteis; discus inconspicuus; ovarium conice elevatum, in stylum, 9—15 mm. longum, insensim transeuns; stigmata 5, ad 4 mm. longa.

CAPE PROVINCE: Namaqualand; Richtersveld, Rooiberg, Jan. 1961, *A. J. Middlemost*. N.B.G. 410/61a. Fl. Apr. 1964.

Conophytum kennedyi L. Bol. sp. nov. (*Celatistamina-Fenestrata*).—Plantae plures floriferae visae, glabrae, ca. ad 2.5 cm. altae, ad 6 cm. diam.; vaginae persistentes crebrae, inferne tenuiter pergamentaceae brunneae, superne incrassatae griseaeque, ad 1.7 cm. longae; corpuscula oblonga vel late obovata, viridia, fenestra sat crebre saturate viride punctata, vel rarissime “insulis” paucis ornata, 1.3—1.9 cm. longa, 7—12 mm. lata, ad 1.5 cm. diam., ore 1.5—1.2 mm. longo; pedunculi ad 7 mm. longi, prope basim bracteati, bracteis ca. 1.5 mm. longis, lobis subobtusis, vagina parum longioribus; receptaculum ad 1.5 mm. longum, ad 2 mm. diam.; calyx membranaceus fugax, ca. 1 cm. longus, segmentis 5, ca. 1.5 mm. longis; corolla 1.8—2.2 cm. longa, tubo 1.2—1.5 cm. longo, aurantiaco, segmentis exterioribus ca. 3-seriatis, apice rotundo vel subtruncato emarginatoque, superne roseis, inferne albis itaque “oculum” album formantibus, 7—9 mm. longis, fere ad 2 mm. latis; staminodia sat pauca, omnino alba vel prope apicem rosea, obtusa vel acuta, ca. ad 4 mm. longa; stamina 4—7-seriata, e parum infra medium tubi adnata, suprema apicem tubi attingentia; discus sat humilis, segmentis truncatis; ovarium supra circa marginem concavum, medio conice elevato, altitudinem disci fere attingente; stylus ca. 1.75 mm. longus; stigmata 5, ad 2.5 mm. longa; capsula infra globose obconica, fere 2 mm. longa, ad 4 mm., expansa 9 mm., vel cum appendicibus 11.5 mm., diam., supra circa marginem plana, medio per 1.5 mm. acute elevato, alis valvarum semicircularibus, omnino adnatis, apicem attingentibus, valvis ultra alas appendiculatis, appendice 1.25 mm. longa.

CAPE PROVINCE: Namaqualand; “on the farm Smôrenskaadu, 25 miles E. of Springbok on the road to Pofadder”, Jul. 1962, *H. C. Kennedy*. N.B.G. 655/62. Ibidem, Jul. 1965, *H. Hall* 2993. (Typus). Fl. Apr. 1966. N.B.G. 302/65.

This species is closely allied to *C. lithopoides* L. Bol., the type of which also has the valves of the capsule appendiculate, as was portrayed by Miss B. O. Carter in her drawing, but by an oversight on my part was not included in the type-description. It differs from that species in having the vegetative parts glabrous (not "very minutely setiferously papillate"), the persistent sheaths thicker, the window without a coloured dendritic marking, the peduncle longer and the bracts much shorter.

The appendix of the valves of the capsule appears to be the persistent remains of the style and requires further investigation by the botanists who make a special study of the capsules of the *Mesembrieae*.

Lampranthus antonii L. Bol. sp. nov.—Plantae ferae 3 visae, glabrae. **Cephalophyllum** sat simulantes, caespitosae, ca. ad 4 cm. altae, ramos reptantes, 5—12 cm. longos, internodiis 2·5—3·5 cm. longis, emittentes; folia ascendentia vel fere erecta, supra visa linearia, e supra medium leviter angustata, acuta apiculata, lateribus convexulis, dorso rotundo vel carina ad lineam reducta, 2—5 cm. longa, medio 2—6 mm. lata, 2—5 mm. diam.; flores solitarii, 5—6·6 cm. diam.; pedunculus 7—13 mm. longus; receptaculum subclavatum, 5—7 mm. longum, 6—7 mm. diam.; sepalia 5, subaequilonga, ad 8 mm. longa, basi 5 mm. lata, exteriora 2 acuta, interiora latissime brunneo marginata; petala ca. 4-seriata, intima pauca filamentosa, inferne leviter angustata, obtusa alba, cum aetate pallidissime rosea, 1·5—2·7 cm. longa, 1·5—2 mm. lata; staminodia nulla; stamina ca. 4—5-seriata, filamentis epapillatis albis, ad 5 mm. longis, antheris pollineque primum luteis; discus crenulatus; ovarium supra profunde concavum, lobis inconspicuis; stigmata 5, anguste subulata, caudata, 5—6 mm. longa cum cauda ad 2 mm. longa; capsula inferne globose obconica, 10-costata, ca. ad 1·1 cm. longa, ad 9 mm., expansa 14 mm., diam., supra per 3 mm. elevata, suturis leviter compressis, carinis cucullatis, inferne divergentibus, superne convergentibus, apicem valvae attingentibus.

CAPE PROVINCE: in dit. Ceres; "N. of Ceres at W. foot of Agterwitsenberg Pass, common on moist rocks." Sept. 1965, *Antony V. Hall* 1053.

Lampranthus gracilipes (L. Bol.) N.E.Br. forma **luxurians**.—Flores meridiani, ad 3·9 cm. diam., diutini, sepalis autem recurvatis manentibus; petala e medio vel supra inferne angustata, apice rotundo, nitente purpureo rosea, externe pallidiora, ad 1·7 cm. longa, ad 2·5 mm. lata; staminodia nulla; filamenta 3—4-seriata, ad 2·5 mm. longa, intima prope basim roseo papillata; ovarium circa marginem planum, deinde leviter elevatum, lobis fere erectis, distantibus; stigmata inferne anguste subulata, ad 2·5 mm. longa cum cauda 1 mm. longa; capsula infra subglobosa, ca. 6 mm. longa, 5 mm., expansa 1 cm., diam., carinis inferne parallelis, superne patentibus, marginibus laceratis cum alis apicem valvae attingentibus.

CAPE PROVINCE: in dit. Clanwilliam; Pakhuis Pass, Oct. 1965, *H. Hall* 3039.

The type of this species was obtained in 1924 from the Piquetberg exhibit at a wild-flower show in Cape Town, the exact locality and collector being unknown. It was published in 1929 (*Mesemb.* II: 73). The first collection of documented specimens was made by H. Bolus in 1892 near Piquetberg, followed by two of N. S. Pillans in 1934 and 1935. From 1930 onwards the range of distribution recorded extended to Grey's Pass, then in the Clanwilliam Division from Witte Els Kloof, Krakadouw Poort, Uitkyk Pass, Pakhuis, and finally a collection made by E. Esterhuysen in the Vanrhynsdorp Div. on the Giftberg Plateau in 1958. All these collections are represented in the Bolus Herbarium.

KEY TO THE SPECIES OF *ASTRIDIA*.

1. Herbaceous parts glabrous
 2. Upper surface of leaves lanceolate acute; staminodes absent .. VANHEERDEI
 2. Upper surface of leaves linear; staminodes present
 3. Upper surface of leaves round at the apex .. HERREI
 3. Upper surface of leaves acute or acuminate
 4. Outer petals dense, red, up to 2·2 cm. long, 2 mm. broad LONGIFOLIA
 4. Outer petals lax, bright purplish red, up to 3 cm. long, 3 mm. broad .. VANBREDAI
1. Herbaceous parts ± velvety
 5. Petals white or pale lemon
 6. Staminodes present
 7. Petals white, stigmas as long as, or shorter than, the stamens
 8. Upper surface of mature leaves ovate acuminate or lanceolate, apex erect .. DINTERI
 8. Upper surface of mature leaves linear-lanceolate, apex recurved .. ALBA
 7. Petals pale lemon; stigmas well exceeding the stamens .. CITRINA
 6. Staminodes absent
 9. Leaves strongly compressed laterally, acutely keeled, up to 8 cm., or cultivated 11·7 cm., long; filaments white .. HALLII
 9. Leaves not compressed, obtusely keeled, sides convex, up to 6 cm. long; filaments yellow upwards .. RUSCHII
 5. Petals some shade of red or pink or salmon-pink, usually paler in the lower part
 10. Petals red
 11. All the sepals ± margined, the outer as broad as, or broader than, long .. LATISEPALA
 11. Outer sepals not margined, usually longer than broad
 12. Lobes of the ovary stellately spreading and reaching the disk .. RUBRA
 12. Lobes of the ovary ± erect, not reaching the disk
 13. Petals 6-seriate, red-orange; stigmas well exceeding the stamens .. SPECIOSA
 13. Petals 2—3-seriate, red; stigmas shorter than the stamens .. SWARTPOORTENSIS
 5. Petals pink or salmon-pink
 14. Petals pink; stigmas shortly caudate, leaves often falcate
 15. Upper surface of leaves oblong, usually obtuse or round at the apex .. BLANDA
 15. Upper surface of leaves linear or narrowly ovate, acute .. DULCIS
 14. Petals salmon-pink; stigmas long-caudate; leaves not falcate .. HILLII

CORRECTIONS

Line 1, p. 201 for *Jensenobotrya vanheerdei*, L. Bol. read *Stoeberia carpiana* Friedr.

(I am indebted to Mr. H. Hall for drawing attention to this deplorable error.)

Mr. van Heerde's collection is the second one recorded for this species and it has extended the southern limit considerably.

KEY TO THE GROUPS AND SUBGROUPS OF *Trichodiadema* (AMENDED).

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|---|-----------|
| 1. Papillae tipped with a soft hair—e.g. <i>T. strumosum</i> , <i>T. fergusoniae</i> . . | STRUMOSA |
| 1. Papillae not as above | ESTRUMOSA |
| 2. Leaves $\pm$ conspicuously tipped with bristles | SETIFERA |
| 3. Bristles radiating to form a diadem | RADIANTIA |
| 4. Plants low growing, densely compact or loosely branched
—e.g. <i>T. densum</i> , <i>T. barbatum</i> | BARBATA |
| 4. Plants with elongated virgate branches—e.g. <i>T. setuliferum</i> ,
<i>T. pomeridianum</i> | VIRGATA |
| 3. Bristles erect, forming a tuft—e.g. <i>T. intonsum</i> | STRICTA |
| 2. Leaves not, or very obscurely, tipped with bristles—e.g. <i>T.</i>
<i>attonsum</i> | ATTONSA |

NOTE.—The type specimens of all new species described in this paper are in the Bolus Herbarium, University of Cape Town.

(To be continued)